

Serial Number 09/719,277

Group Art No.: 1648

Listing of Claims**In the claims:**

1-37. Canceled.

38. (Currently Amended) The method of claim ~~34~~ 53 or 54, wherein the ~~polypeptide~~ comprises an amino acid sequence ~~is~~ encoded by a reading frame corresponding to the reading frame of SEQ ID NO:1 in which the first nucleotide of SEQ ID NO:1 is the first nucleotide of a codon.

39. (Currently Amended) The method of claim ~~34~~ 53 or 54, wherein the ~~polypeptide~~ amino acid sequence is at least about 8 amino acids ~~to at least about 100 amino acids~~ in length.

40. (Currently Amended) The method of claim ~~34~~ 53 or 54, wherein the ~~polypeptide~~ amino acid sequence is at least about 14 amino acids ~~to at least about 30 amino acids~~ in length.

41. (Currently Amended) The method of claim ~~34~~ 53 or 54, wherein the entire polypeptide is encoded by a reading frame +1 or +2 to the standard hepatitis C reading frame.

42. (Currently Amended) The method of claim ~~53 or 54~~ 34, wherein the ~~polypeptide~~ comprises an amino acid sequence ~~is~~ at least about 60% -70% identical to the amino acid sequence shown in SEQ ID NO:2 using FASTA alignment over a length of at least about 10 amino acids.

43. (Currently Amended) The method of claim ~~53 or 54~~ 34, wherein the ~~polypeptide~~ comprises an amino acid sequence ~~is~~ at least about 90% identical to the amino acid sequence shown in SEQ ID NO:2 using FASTA alignment over a length of at least about 10 amino acids.

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44. (Currently Amended) The method of claim 53 or 54 ~~31~~, wherein the amino acid sequence polypeptide comprises at least 8 contiguous amino acids of SEQ ID NO:2.
45. (Currently Amended) The method of claim 53 or 54 ~~31~~, wherein the polypeptide amino acid sequence comprises at least 8 contiguous amino acids of SEQ ID NO:9.
46. (Currently Amended) The method of claim 53 or 54 ~~31~~, wherein the polypeptide amino acid sequence is encoded by a nucleic acid molecule which hybridizes under high stringency to a nucleic acid molecule having the nucleotide sequence shown in SEQ ID NO:1.
47. (Currently Amended) The method of claim 53 or 54 ~~31~~, wherein the polypeptide ~~comprises an amino acid sequence~~ is selected from the group consisting of: SEQ ID NO: 3, SEQ ID NO:4, SEQ ID NO:5, and SEQ ID NO:6, ~~SEQ ID NO:7, and SEQ ID NO:8.~~
48. (Currently Amended) The method of claim 53 or 54 ~~31~~, wherein the polypeptide ~~comprises an amino acid sequence~~ is selected from the group consisting of: LNLKEKP(X1)(X2)TPT(X3) (SEQ ID NO:3) and AAHRT(X4)SSR(X5)(X6)VR (SEQ ID NO:4), wherein X1 is N or K, X2 is V or E, X3 is A or V, X4 is L or S, X5 is A or V, and X6 is A or V.
49. (Currently Amended) The method of claim 53 or 54 ~~31~~, wherein the polypeptide ~~comprises an amino acid sequence~~ is selected from the group consisting of: LNLKEKPNVTPTAC (SEQ ID NO:5) and AAHRTSSSRVVRC (SEQ ID NO:6).
50. (Currently Amended) The method of claim 55 ~~28~~, wherein the antibody is polyclonal.
51. (Currently Amended) The method of claim 55 ~~28~~, wherein the antibody is monoclonal.
52. (New) A method of diagnosing HCV infection, comprising detecting a molecule indicative of an infection with Hepatitis C virus (HCV) wherein the molecule is selected from the group consisting of: i) a polypeptide comprising an immunogenic amino acid sequence of an HCV alternate reading frame polypeptide, ii) a polypeptide comprising an amino acid sequence

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of an HCV alternate reading frame polypeptide that is immunoreactive with an antibody that specifically binds to an HCV alternate reading frame polypeptide, and iii) an antibody that specifically binds to an HCV alternate reading frame polypeptide.

53. (New) The method of claim 52, wherein the molecule is a polypeptide comprising an amino acid sequence encoded by a reading frame +1 to the standard HCV open reading frame.

54. (New) The method of claim 52, wherein the molecule is an antibody that specifically binds to a polypeptide comprising an amino acid sequence encoded by a reading frame +1 to the standard HCV open reading frame.

55. (New) The method of claim 53, wherein the presence or absence of the polypeptide is detected by contacting a test sample comprising body fluid or cells of a subject with an antibody that specifically binds to a polypeptide comprising an amino acid sequence encoded by a reading frame +1 to the standard HCV open reading frame under conditions which allow the binding of the antibody and the polypeptide.

56. (New) The method of claim 54, wherein the presence or absence of the antibody is detected by contacting a test sample comprising body fluid of a subject with a polypeptide comprising an amino acid sequence encoded by a reading frame +1 to the standard HCV open reading frame specifically recognized by the antibody under conditions which allow the binding of the antibody to the polypeptide.

57. (New) The method of claim 53 or 54, wherein the amino acid sequence is at least about 60% to 70% identical to a polypeptide sequence shown in SEQ ID NO:2 over at least about 30-40 amino acids.

58. The method of claim 53 or 54, wherein the amino acid sequence is at least about 100 amino acids in length.